

REMARKS

In response to the Office Action mailed June 4, 2007, Applicants respectfully request reconsideration. Claims 1-28 were previously pending in this application. By this amendment, claims 1, 8, 15 and 22 have been amended. As a result, claims 1-28 are pending for examination with claims 1, 8, 15, and 22 being independent. No new matter has been added.

Objections to the Specification

The Office Action objected to the disclosure as containing informalities in paragraph [0024] and [0037] of the specification. Applicants have amended the specification to address the objections.

The Office Action also objected to the Amendment filed on March 16, 2007, under U.S.C. 132(a) as allegedly introducing new matter into the disclosure. Applicants have amended the specification to cancel the amendments made by the Amendment filed on March 16, 2007, except for amendments suggested by the Examiner.

Accordingly, withdrawal of these objections is respectfully requested.

Objections to the Claims

The Office Action objected to claim 1 as containing informalities. Applicants have amended claims 1 and 15 to address the informalities.

Accordingly, withdrawal of this objection is respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejected claims 1, 4-7, 15, 18-21 under 35 U.S.C. 102(e) as being anticipated by Boyd et al., U.S. Patent No. 6,721,806 (Hereinafter Boyd). Applicants respectfully disagree. In addition, without acceding to the appropriateness of the rejections, Applicants have amended independent claims 1 and 15 to more clearly distinguish over the cited reference.

A. Claim 1

Claim 1, as amended, recites:

A method for transferring control between a first network interface and at least a second network interface in a multiple network interface device, after the first network interface sends an identifier, the identifier associated with a memory location in the multiple network interface device, to a second device, the identifier and an associated data field capable of being received by the second network interface, the method comprising:

receiving a message from the second network interface by a program component, the message indicating the reception of the identifier and the associated data field from the second device, *wherein the second network interface has no knowledge of the identifier and the associated data field*;

passing the identifier to the program component;

querying the first network interface to supply the program component with a list of identifiers generated by the first network interface and associated memory locations in multiple network interface device memory;

identifying, by the program component, that the first network interface generated the identifier; and

transmitting a memory location associated with the identifier to the second network interface, the second network interface capable of transmitting the associated data field to the memory location associated with the identifier.

(Emphasis added).

Boyd is directed to supporting RNIC (RDMA enabled NIC) switchover and switchback. Boyd, as discussed in the Amendment filed on March 16, 2007, which is incorporated herein by reference, describes that the verbs consumer 1156 determines that primary RNIC 1100 and alternate RNIC 1104 support switchover/switchback (S/S) by invoking the RNIC management query verb 1124 and 1136 respectively. The RNIC management query verb returns the RNIC capabilities, which, in this exemplary embodiment, include a field that indicates the RNIC supports switchover/switchback (S/S). The verb consumer 1156 next uses the RNIC management modify verb 1124 and 1136 to assign a range of Queue Pairs (QPs), Completion Queues (CQs), and Memory Translation and Protection Table (TPT) entries to S/S and non-S/S support. As a result of successfully completing the RNIC modify verb, the primary RNIC 1100 and alternate RNIC 1104 **share a common** QP, CQ, and Memory TPT range (see Boyd, col. 14, lines 26-39).

Boyd does not teach or suggest “receiving a message from the second network interface by a program component, the message indicating the reception of the identifier and the associated data field from the second device, wherein the second network interface has no knowledge of the identifier and the associated data field,” as recited in claim 1.

In view of the foregoing, claim 1 patentably distinguishes over Boyd.

Claims 2-7 depend from claim 1 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 1-7 is respectfully requested.

B. Claim 15

Claim 15, as amended, recites:

A computer readable medium having stored therein instructions for performing acts for transferring control between a first network interface and at least a second network interface in a multiple network interface device, after the first network interface sends an identifier, the identifier associated with a memory location in the multiple network interface device to a second device, the identifier and an associated data field capable of being received by the second network interface; the acts comprising:

receiving a message from the second network interface by a program component, the message indicating the reception of the identifier and the associated data field from the second device, *wherein the second network interface has no knowledge of the identifier and the associated data field;*

passing the identifier to the program component;

querying the first network interface to supply the program component with a list of identifiers generated by the first network interface and associated memory locations in multiple network interface device memory;

identifying, by the program component, that the first network interface generated the identifier; and

transmitting a memory location associated with the identifier to the second network interface, the second network interface capable of transmitting the associated data field to the memory location associated with the identifier.

(Emphasis added).

As discussed above, Boyd does not teach or suggest “receiving a message from the second network interface by a program component, the message indicating the reception of the identifier and the associated data field from the second device, wherein the second network interface has no knowledge of the identifier and the associated data field,” as recited in claim 15.

In view of the foregoing, claim 15 patentably distinguishes over Boyd.

Claims 16-21 depend from claim 15 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 15-21 is respectfully requested.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 2-3, 8-14, 16-17, 22-28 under 35 U.S.C. 103(a) as being allegedly unpatentable over Boyd in view of the Internet Draft document “RDMA Protocol Verbs Specification” by Jeff Hilland (hereinafter Hilland). Applicants respectfully disagree. In

addition, without acceding to the appropriateness of the rejections, Applicants have amended independent claims 8 and 22 to more clearly distinguish over the cited references.

C. Claim 8

Claim 8, as amended, recites:

A method for transferring control between a first network interface and at least a second network interface in a host computer including the first network interface and the second network interface, the method comprising:

receiving an identifier from a remote computer by the at least a second network interface, the identifier generated by the first network interface and associated with a memory location in the host computer, *wherein the second network interface has no knowledge of the identifier and the associated data field;*

sending a message to a program component indicating the reception of the identifier, the program component configured to query the first network interface for a list of identifiers generated by the first network interface and associated memory locations in the host computer;

passing the identifier received from the remote computer to the program component;

searching the list of identifiers for the identifier;

if the list of identifiers includes the identifier received from the remote computer, receiving a memory location associated with the identifier; and

if the list of identifiers does not include the identifier received from the remote computer, invalidating the identifier received from the remote computer.

(Emphasis added).

As discussed above, Boyd does not teach or suggest “receiving an identifier from a remote computer by the at least a second network interface, the identifier generated by the first network interface and associated with a memory location in the host computer, wherein the second network interface has no knowledge of the identifier and the associated data field,” as recited in claim 8.

In view of the foregoing, claim 8 patentably distinguishes over Boyd.

Claims 8-14 depend from claim 8 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 8-14 is respectfully requested.

D. Claim 22

Claim 22, as amended, recites:

A computer readable medium having stored therein instructions for performing acts for transferring control between a first network interface and at

least a second network interface in a host computer including the first network interface and the second network interface, the method comprising:

- receiving an identifier from a remote computer by the at least a second network interface, the identifier generated by the first network interface and associated with a memory location in the host computer, *wherein the second network interface has no knowledge of the identifier and the associated data field;*

- sending a message to a program component indicating the reception of the identifier, the program component configured to query the first network interface for a list of identifiers generated by the first network interface and associated memory locations in the host computer;

- passing the identifier received from the remote computer to the program component;

- searching the list of identifiers for the identifier;

- if the list of identifiers includes the identifier received from the remote computer, receiving a memory location associated with the identifier; and

- if the list of identifiers does not include the identifier received from the remote computer, invalidating the identifier received from the remote computer.

(Emphasis added).

As discussed above, Boyd does not teach or suggest “receiving an identifier from a remote computer by the at least a second network interface, the identifier generated by the first network interface and associated with a memory location in the host computer, wherein the second network interface has no knowledge of the identifier and the associated data field,” as recited in claim 22. Hilland does not teach or suggest the above limitations of claim 22.

In view of the foregoing, claim 22 patentably distinguishes over Boyd and Hilland, either alone or in combination.

Claims 23-28 depend from claim 22 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 22-28 is respectfully requested.

CONCLUSION

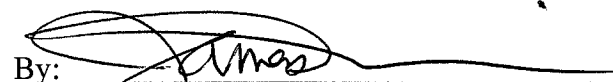
A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: August 24, 2007

Respectfully submitted,

By:



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